General

Guideline Title

WHO guideline: daily iron supplementation in adult women and adolescent girls.

Bibliographic Source(s)

World Health Organization (WHO). WHO guideline: daily iron supplementation in adult women and adolescent girls. Geneva (Switzerland): World Health Organization (WHO); 2016. 26 p. [28 references]

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Recommendations

Major Recommendations

Definitions for the strength of the recommendations (strong, conditional) and the quality of evidence (high, moderate, low, very low) are provided at the end of the "Major Recommendations" field.

Recommendation[1]

Daily iron supplementation is recommended as a public health intervention in menstruating adult women and adolescent girls, living in settings where anaemia is highly prevalent (≥40% anaemia prevalence),[2] for the prevention of anaemia and iron deficiency (strong recommendation, moderate quality of evidence).

[1]This recommendation supersedes those of previous World Health Organization (WHO) guidelines on iron supplementation in menstruating adult women and adolescent girls.

[2]Where the prevalence of anaemia is 40% or higher in this age group. For the latest estimates, please refer to the WHO-hosted Vitamin and Mineral Nutrition Information System (VMNIS).

Suggested Scheme for Daily Iron Supplementation in Adult Women and Adolescent Girls

Target Group	Menstruating adult women and adolescent girls (non-pregnant females in the reproductive age of group)

Supplement Composition **Supplement Form**	30–60 mg elemental iron[a] Tablets
Frequency	Daily
Duration	Three consecutive months in a year
Settings	Where the prevalence of anaemia in menstruating adult women and adolescent girls is 40% or higher[b]

[a] 30–60 mg of elemental iron equals 150–300 mg of ferrous sulfate heptahydrate, 90–180 mg of ferrous fumarate, or 250–500 mg of ferrous gluconate.

[b] In the absence of prevalence data in this group, consider proxies for high risk of anaemia. For the most recent estimates, visit the WHO hosted Vitamin and Mineral Nutrition Information System (VMNIS).

Remarks

The remarks in this section are intended to give some considerations for implementation of the recommendation, based on the discussion of the guideline development group.

- Daily oral iron supplementation is a preventive strategy for implementation at the population level. If a menstruating woman or adolescent girl is diagnosed with anaemia, national guidelines for the treatment of anaemia should be followed.
- Daily iron supplementation should be considered in the context of other interventions containing iron (fortified foods, multiple micronutrient powders, lipid-based nutrient supplements).
- The selection of the most appropriate delivery platform should be context specific, with the aim of reaching the most vulnerable populations and ensuring a timely and continuous supply of supplements.
- All women, from the moment they begin trying to conceive until 12 weeks of gestation, should take a folic acid supplement. Daily oral iron and folic acid supplementation should be part of routine antenatal care, begun as early as possible and continued throughout pregnancy. Where the prevalence of anaemia in pregnant women is high (40% or more), supplementation should continue for 3 months in the postpartum period.

Definitions

Quality of Evidence in Grading of Recommendations Assessment, Development and Evaluation (GRADE)

High: The guideline development group is very confident that the true effect lies close to that of the estimate of the effect.

Moderate: The guideline development group is moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

Low: Confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the true effect.

Very low: The guideline development group has very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of the effect

Strength of Recommendations

- Strong: Strong recommendations communicate the message that the guideline is based on the confidence that the desirable effects of adherence to the recommendation outweigh the undesirable consequences. Strong recommendations are uncommon because the balance between the benefits and harms of implementing a recommendation is rarely certain. In particular, guideline development groups need to be cautious when considering making strong recommendations on the basis of evidence whose quality is low or very low.
- Conditional: Recommendations that are conditional or weak are made when a guideline development group is less certain about the balance between the benefits and harms or disadvantages of implementing a recommendation. Conditional recommendations generally include a description of the conditions under which the end-user should or should not implement the recommendation.

Interpretation of Strong and Conditional Recommendations for an Intervention

Audience	Strong Recommendation	Conditional Recommendation

Audience	Strong Recommendation	Conditional Recommendation
Patients	Most individuals in this situation would want the recommended course of action; only a small proportion would not. Formal decision aids are not likely to be needed to help individuals make decisions consistent with their values and preferences.	Most individuals in this situation would want the suggested course of action, but many would not.
Clinicians	Most individuals should receive the intervention. Adherence to the recommendation could be used as a quality criterion or performance indicator.	Different choices will be appropriate for individual patients, who will require assistance in arriving at a management decision consistent with his or her values and preferences. Decision aides may be useful in helping individuals make decisions consistent with their values and preferences.
Policymakers	The recommendation can be adopted as policy in most situations.	Policy-making will require substantial debate and involvement of various stakeholders.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Iron deficiency anaemia

Guideline Category

Prevention

Clinical Specialty

Family Practice

Internal Medicine

Nutrition

Obstetrics and Gynecology

Pediatrics

Preventive Medicine

Intended Users

Advanced Practice Nurses

Dietitians

Health Care Providers

Nurses

Other

Physician Assistants

Physicians

Public Health Departments

Guideline Objective(s)

- To provide a global, evidence-informed recommendation on daily iron supplementation in menstruating adult women and adolescent girls, as a public health intervention for the prevention of anaemia and iron deficiency
- To help Member States and their partners in their efforts to make informed decisions on the appropriate nutrition actions to achieve the Sustainable Development Goals (SDGs), in particular, Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- To support Member States in their efforts to achieve the global targets set in the *Comprehensive implementation plan on maternal, infant and young child nutrition*, as endorsed by the Sixty-fifth World Health Assembly in 2012, in resolution WHA65.6, and the *Global strategy for women's, children's, and adolescent girls' health (2016–2030)*

Target Population

Menstruating adult women and adolescent girls (non-pregnant females in the reproductive age group)

Interventions and Practices Considered

Iron supplementation (iron dose, frequency, duration, additional nutrients)

Major Outcomes Considered

Primary Outcomes

- Anaemia
- Haemoglobin
- Iron deficiency
- Iron-deficiency anaemia
- All-cause mortality
- Adverse side effects
- Cognitive function

Secondary Outcomes

- Iron status
- Physical exercise performance (in particular peak exercise performance [VO_2 max/peak - absolute and relative], submaximal exercise performance [heart rate, percentage VO_2 max, energy consumption], and endurance [time])
- Psychological health (e.g., depression, fatigue, anxiety)
- Adherence (percentage of women who consumed more than 70% of the expected doses)
- Anthropometric measures (Z scores for height and weight by age for adolescents, and body mass index for adults)
- Serum/plasma zinc
- Vitamin A status
- Red cell folate
- Malaria incidence
- Malaria severity

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Searches of Unpublished Data

Description of Methods Used to Collect/Select the Evidence

Summary of Available Evidence

The evidence that informed the recommendation on daily iron supplementation in menstruating adult women and adolescent girls is based on a systematic review of women and adolescent girls beyond menarche and prior to menopause who were not pregnant or lactating and did not have any condition that impedes the presence of menstrual periods. The systematic review also included studies for which results for girls and women aged between 12 and 50 years (plausible age range for menstruation) could be extracted separately, or in which more than half of the participants fulfilled this criterion. The review excluded studies on populations with conditions affecting iron metabolism, intestinal malabsorption conditions, ongoing excessive blood loss (including ongoing blood donations), inflammatory bowel disease, cancer, chronic congestive cardiac failure, chronic renal failure, chronic liver failure or chronic infectious disease, or hospitalized or ill patients. See the "Availability of Companion Documents" field for the full text of the reviews and details of the literature search performed.

The review included randomized controlled trials comparing daily iron supplementation (with or without a coâ€‘intervention such as folic acid or vitamin C) to placebo or supplementation without iron. Daily supplementation was defined as receiving iron for at least 5 days in a week.

The systematic review searched the Cochrane Central Register of Controlled Trials (CENTRAL), Ovid MEDLINE, EMBASE (Ovid), CINAHL (EBSCOHost), Conference Proceedings Citation Index – Science (CPCI-S), Science Citation Index (SCI), POPLINE, IMSEAR, LILACS, IMERMR, African Index Medicus, and the following databases for grey literature: WorldCat, DART-Europe E-theses Portal, Australasian Digital Theses Program, Theses Canada Portal, and ProQuest-Dissertations and Theses. The search for evidence was done in September 2014.

See the systematic review for detailed information on search strategies and inclusion and exclusion criteria.

Number of Source Documents

The search strategy identified 31,767 records for possible inclusion, 9918 of which were duplicates. Three studies were published in languages other than English; these were translated to English for extraction. After screening, 90 full-text reports were assessed for eligibility. Sixty-seven studies (from 76 reports and one personal communication) were included (see Figure 1 in the systematic review for a study flow diagram [see the "Availability of Companion Documents" field]).

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality of Evidence in Grading of Recommendations Assessment, Development and Evaluation (GRADE)

High: The guideline development group is very confident that the true effect lies close to that of the estimate of the effect.

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the estimate of the effect.

Methods Used to Analyze the Evidence

Meta-Analysis

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

The quality of evidence for the critical outcomes is moderate for anaemia and iron deficiency, using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) methodology; there was no evidence for the outcome of iron deficiency anaemia. The GRADE summary of findings table for daily oral iron supplementation compared to placebo or control in menstruating adult women and adolescent girls is shown in Annex 1 in the original guideline document.

See the companion systematic review (refer to the "Availability of Companion Documents" field) for the information on data extraction, quality assessment, and data synthesis.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

This guideline was developed in accordance with the World Health Organization (WHO) evidence-informed guideline development procedures, as outlined in the *WHO handbook for guideline development* (see the "Availability of Companion Documents" field).

Advisory Groups

The WHO Steering Committee for Nutrition Guidelines Development, led by the Department of Nutrition for Health and Development, was established in 2009 with representatives from all WHO departments with an interest in the provision of scientific nutrition advice. The WHO Steering Committee for Nutrition Guidelines Development met twice yearly and both guided and provided overall supervision of the guideline development process. Two additional groups were formed: a guideline development group and an external review group.

One guideline development group participated in the development of this guideline. Its role was to advise WHO on the choice of important outcomes for decision-making and on interpretation of the evidence. The WHO guideline development group – nutrition actions includes experts from various WHO expert advisory panels and those identified through open calls for specialists, taking into consideration a balanced mix of sex, multiple disciplinary areas of expertise, and representation from all WHO regions. Efforts were made to include content experts, methodologists, representatives of potential stakeholders (such as managers and other health professionals involved in the health-care process), and ministries of health from Member States. Representatives of commercial organizations may not be members of a WHO guideline group.

Scope of the Guideline, Evidence Appraisal and Decision-making

An initial set of questions (and the components of the questions) to be addressed in the guideline formed the critical starting point for formulating the recommendation. The questions were drafted by technical staff at the Evidence and Programme Guidance Unit, Department of Nutrition for Health and Development, based on the policy and programme guidance needs of Member States and their partners. The population, intervention, control, outcomes (PICO) format was used (see Annex 8 in the original guideline document). The questions were discussed and reviewed by the WHO Steering Committee for Nutrition Guidelines Development and the guideline development group – nutrition actions, and were modified as needed.

A meeting of the guideline development group – nutrition actions was held on 14–16 March 2010, in Geneva, Switzerland, to finalize the scope of the questions and rank the outcomes and populations of interest for the recommendation on iron supplementation. The guideline development group discussed the relevance of the questions and modified them as needed. The group scored the relative importance of each outcome from 1 to

9 (where 7–9 indicated that the outcome was critical for a decision, 4–6 indicated that it was important and 1–3 indicated that it was not important). The final key questions on this intervention, along with the outcomes that were identified as critical for decision-making, are listed in PICO format in Annex 8 of the original guideline document.

A systematic review was used to summarize and appraise the evidence using the Cochrane methodology for randomized controlled trials and observational studies. Evidence summaries were prepared according to the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach to assess the overall quality of the evidence. GRADE considers the study design; the limitations of the studies in terms of their conduct and analysis; the consistency of the results across the available studies; the directness (or applicability and external validity) of the evidence with respect to the populations, interventions and settings where the proposed intervention may be used; and the precision of the summary estimate of the effect.

Both the systematic review and the GRADE evidence profiles for each of the critical outcomes were used for drafting this guideline. The draft recommendation was discussed by the WHO Steering Committee for Nutrition Guidelines Development and in consultations with the WHO guideline development group – nutrition actions, held on 14–18 March 2011 and 23–26 June 2014 in Geneva, Switzerland.

The procedures for decision-making are established at the beginning of the meetings, including a minimal set of rules for agreement and decision-making documentation. At least two thirds of the guideline development group should be present for an initial discussion of the evidence and proposed recommendation and remarks. The members of the guideline development group secretly noted the direction and strength of the recommendation, using a form designed for this purpose, that also included a section for documenting their views on (i) the desirable and undesirable effects of the intervention; (ii) the quality of the available evidence; (iii) values and preferences related to the intervention in different settings; and (iv) the cost of options available to health-care workers in different settings (see Annex 2 of the original guideline document). Abstentions were not allowed. The process was improved with the availability of a predefined link to an online form prepared using survey software. Subsequent deliberations among the members of the guideline development group were of private character. The WHO Secretariat collected the forms and disclosed a summary of the results to the guideline development group. If there was no unanimous consensus (primary decision rule), more time was given for deliberations and a second round of online voting took place. If no unanimous agreement was reached, a two thirds vote of the guideline development group was required for approval of the proposed recommendation (secondary decision rule). Divergent opinions could be recorded in the guideline. The results from voting forms are kept on file by WHO for up to 5 years. Although there was no unanimous consensus, more than 80% of the voting members of the guideline development group decided that the recommendation was strong.

WHO staff present at the meeting, as well as other external technical experts involved in the collection and grading of the evidence, were not allowed to participate in the decision-making process. Two co-chairs with expertise in managing group processes and interpreting evidence were nominated at the opening of the consultation, and the guideline development group approved the nomination. Members of the WHO Secretariat were available at all times, to help guide the overall meeting process, but did not vote and did not have veto power.

Rating Scheme for the Strength of the Recommendations

Strength of Recommendations

- Strong: Strong recommendations communicate the message that the guideline is based on the confidence that the desirable effects of adherence to the recommendation outweigh the undesirable consequences. Strong recommendations are uncommon because the balance between the benefits and harms of implementing a recommendation is rarely certain. In particular, guideline development groups need to be cautious when considering making strong recommendations on the basis of evidence whose quality is low or very low.
- Conditional: Recommendations that are conditional or weak are made when a guideline development group is less certain about the balance between the benefits and harms or disadvantages of implementing a recommendation. Conditional recommendations generally include a description of the conditions under which the end-user should or should not implement the recommendation.

Interpretation of Strong and Conditional Recommendations for an Intervention

Audience	Strong Recommendation	Conditional Recommendation
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Audience	Strong Recommendation	Conditional Recommendation
Clinicians	Most individuals should receive the intervention. Adherence to the recommendation could be used as a quality criterion or performance indicator.	Different choices will be appropriate for individual patients, who will require assistance in arriving at a management decision consistent with his or her values and preferences. Decision aides may be useful in helping individuals make decisions consistent with their values and preferences.
Policymakers	The recommendation can be adopted as policy in most situations.	Policy-making will require substantial debate and involvement of various stakeholders.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The final draft guideline was peer-reviewed by three content experts, who provided technical feedback. These peer-reviewers (see Annex 7 of the original guideline document) were identified through various expert panels within and outside the World Health Organization (WHO).

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for the recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Benefits of daily iron supplementation include improved haemoglobin and lower risk of anaemia or iron deficiency, which have functional consequences such as improved exercise performance.

Potential Harms

- Potential harms of iron supplementation include gastrointestinal effects, but evidence is of low quality. There is increased risk of either diarrhoea or constipation, with high quality of evidence.
- Not enough data are available on adverse events, or long-term harm, for instance on overdose, specifically for those who are iron replete.

Qualifying Statements

Qualifying Statements

- The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization (WHO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.
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Implementation of the Guideline

Description of Implementation Strategy

Dissemination

The current guideline will be disseminated through electronic media, such as slide presentations and the World Wide Web, through the World Health Organization (WHO) Nutrition mailing lists, social media, the WHO nutrition Web site or the WHO e-Library of Evidence for Nutrition Actions (eLENA). eLENA compiles and displays WHO guidelines related to nutrition, along with complementary documents such as systematic reviews and other evidence that informed the guidelines; biological and behavioural rationales; and additional resources produced by Member States and global partners. In addition, the guideline will be disseminated through a broad network of international partners, including WHO country and regional offices, ministries of health, WHO collaborating centres, universities, other United Nations agencies and nongovernmental organizations. Derivative products such as summaries and collation of recommendations related to iron supplementation will be developed for a more tailored product that is useful for end-users.

Particular attention will be given to improving access to these guidelines for stakeholders that face more, or specific, barriers in access to information, or to those who play a crucial role in the implementation of the guideline recommendation, for example, policy-makers and decision-makers at subnational level that disseminate the contents of the guideline, and health workers and education staff that contribute to the delivery of the intervention. Disseminated information may emphasize the benefits of iron supplementation in menstruating adult women and adolescent girls in populations or regions presenting an important risk of anaemia and iron deficiency. In addition, these guidelines and the information contained therein should be accessible to the nongovernmental organizations working in coordination with national authorities on the implementation of nutrition interventions, especially those related to the prevention and control of anaemia in menstruating adult women and adolescent girls.

Implementation

As this is a global guideline, it should be adapted to the context of each Member State. Prior to implementation, a public health programme that includes the provision of iron supplements to menstruating adult women and adolescent girls should have well-defined objectives that take into account available resources, existing policies, suitable delivery platforms and suppliers, communication channels, and potential stakeholders. Ideally, iron supplementation should be implemented as part of an integrated programme on adolescent and reproductive health, which includes addressing micronutrient deficiencies.

Considering the experiences of menstruating adult women and adolescent girls with the intervention is also a relevant implementation consideration: ongoing assessment of the accessibility and acceptability of the intervention can inform programme design and development, in order to increase adherence to supplementation and better assess the impact of the programme. This is particularly relevant in settings where the prevailing social norms and determinants may set unequal conditions and opportunities for different groups. For instance, in some settings, social perceptions around ethnicity and race intervene in how certain population groups access and use an intervention.

Supplementation programmes in menstruating adult women and adolescent girls need to be carefully designed, based on locally available evidence and experience. These can include data that can inform the implementation strategies on procurement and supply-chain issues, optimal distribution channels, behaviourâ€‘change communication and specific strategies to identify and reach the most vulnerable adult women and adolescent girls. These are particularly important in the absence of a well-functioning health-care system that reaches this population.

Accessing hard-to-reach population groups is extremely important during implementation stages, as it contributes to preventing or tackling health inequities. Appropriate surveillance and monitoring systems can thus provide information on the impact of the disseminated guidelines and their

implementation (including information on the adequacy of funding and the effectiveness of the supply chain and distribution channels).

Monitoring and Evaluation of Guideline Uptake and Adaptation

A plan for monitoring and evaluation with appropriate indicators, including equity-oriented indicators, is encouraged at all stages. The impact of this guideline can be evaluated within countries (i.e., monitoring and evaluation of the programmes implemented at national or regional scale) and across countries (i.e., adoption and adaptation of the guideline globally). The WHO Department of Nutrition for Health and Development, Evidence and Programme Guidance Unit, jointly with the United States Centers for Disease Control and Prevention (CDC) International Micronutrient Malnutrition Prevention and Control (IMMPaCt) programme, and with input from international partners, has developed a generic logic model for micronutrient interventions in public health, to depict the plausible relationships between inputs and expected sustainable development goals (SDGs), by applying the micronutrient programme evaluation theory. Member States can adjust the model and use it in combination with appropriate indicators, for designing, implementing, monitoring and evaluating the successful escalation of nutrition actions in public health programmes. Additionally, the WHO/CDC *eCatalogue of indicators for micronutrient programmes*, which utilizes the logic model, has been developed as a user-friendly and non-comprehensive Web resource for those actively engaged in providing technical assistance in monitoring, evaluation and surveillance of public health programmes implementing micronutrient interventions. Indicators for iron supplementation are currently being developed and, once complete, will provide a list of potential indicators with standard definitions that can be selected, downloaded and adapted to a local programme context. The eCatalogue will serve as a repository of indicators to monitor and evaluate micronutrient interventions. While it does not provide guidance for designing or implementing a monitoring or evaluation system in public health, some key indicators may include useful references for that purpose.

Since 1991, WHO has hosted the VMNIS micronutrients database. Part of WHO's mandate is to assess the micronutrient status of populations, monitor and evaluate the impact of strategies for the prevention and control of micronutrient malnutrition, and track related trends over time. The Evidence and Programme Guidance Unit of the Department of Nutrition for Health and Development manages the VMNIS micronutrient database, through a network of regional and country offices, and in close collaboration with national health authorities.

For evaluation at the global level, the WHO Department of Nutrition for Health and Development has developed a Web-based WHO Global Targets Tracking Tool that allows users to explore different scenarios to achieve the rates of progress required to meet the 2025 global nutrition targets, including target 2: 50% reduction of anaemia in women of reproductive age, as well as a centralized platform for sharing information on nutrition actions in public health practice implemented around the world. By sharing programmatic details, specific country adaptations and lessons learnt, this platform will provide examples of how guidelines are being translated into actions. The Global database on the Implementation of Nutrition Action (GINA) provides valuable information on the implementation of numerous nutrition policies and interventions. The use of GINA has grown steadily since its launch in November 2012.

An efficient system for the routine collection of relevant data, including relevant determinants of health, therapeutic adherence, and measures of programme performance, is critical to ensure supplementation programmes are effective and sustained, and drivers to the achievement of the right to health for all population groups. Monitoring differences across groups in terms of accessibility, availability, acceptability and the quality of the interventions contributes to the design of better public health programmes. The creation of indicators for monitoring can be informed by the approaches of social determinants of health, so inequities can be identified and tackled. Appropriate monitoring requires suitable data, so efforts to collect and organize information on the implementation are also fundamental.

See the original guideline document for more information on guideline implementation and dissemination, including regulatory and ethical considerations.

Implementation Tools

Quick Reference Guides/Physician Guides

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Staying Healthy

IOM Domain

Effectiveness

Identifying Information and Availability

Bibliographic Source(s)

World Health Organization (WHO). WHO guideline: daily iron supplementation in adult women and adolescent girls. Geneva (Switzerland): World Health Organization (WHO); 2016. 26 p. [28 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2016

Guideline Developer(s)

World Health Organization - International Agency

Source(s) of Funding

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Guideline Committee

World Health Organization (WHO) Steering Committee for Nutrition Guidelines Development

WHO Guideline Development Group

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Financial Disclosures/Conflicts of Interest

According to the rules in the World Health Organization (WHO) Basic documents and the processes recommended in the WHO Handbook for Guideline Development, all experts participating in WHO meetings must declare any interest relevant to the meeting, prior to their participation. The responsible technical officer and the relevant departments reviewed the declarations-of-interest statements for all guideline development group members before finalization of the group composition and invitation to attend a guideline development group meeting. All members of the guideline development group, and participants of the guideline development meetings, submitted a declaration of interests form, along with their curriculum vitae, before each meeting. Participants of the guideline development group meetings participated in their individual capacity and not as institutional representatives. In addition, they verbally declared potential conflicts of interest at the beginning of each meeting. The procedures for management of competing interests strictly followed the WHO guidelines for declaration of interests. The management of the perceived or real conflicts of interest declared by the members of the guideline group is summarized in the original guideline document.

External experts also declared their interest but did not participate in the deliberations or decision-making process.

Guideline Status

This is the current release of the guideline.

This guideline meets NGC's 2013 (revised) inclusion criteria.

Guideline Availability

Available from the World Health Organization (WHO) Web site.

Availability of Companion Documents

The following are available:

- Low MSY, Speedy J, Styles CE, De-Regil LM, Pasricha SR. Daily iron supplementation for improving anaemia, iron status and health in menstruating women (review). Cochrane Database Syst Rev 2016;(4):CD009747. Available from the Wiley Online Library Web site.
- Pasricha SR, Low M, Thompson J, Farrell A, De-Regil LM. Iron supplementation benefits physical performance in women of reproductive age: a systematic review and meta-analysis. J Nutr. 2014 Jun;144(6):906-14. Available from the Journal of Nutrition Web site.
- World Health Organization (WHO). WHO guideline: daily iron supplementation in adult women and adolescent girls. Executive summary. Geneva (Switzerland): World Health Organization (WHO); 2016. 3 p. Available from the World Health Organization (WHO) Web site.
- WHO handbook for guideline development, 2nd edition. Geneva (Switzerland): World Health Organization (WHO); 2014. 179 p. Electronic copies: Available from the WHO Web site.

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on August 17, 2016.

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